

MAU SERIES

1W UNREGULATED

DANUBE

FEATURES

- DUAL IN LINE PACKAGE
- UP TO 1W UNREGULATED OUTPUT POWER
- 100% BURN IN
- HIGH EFFICIENCY
- INTERNAL SMD TECHNOLOGY
- LOW COST
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- MTBF>2,900,000 HOURS
- RoHS COMPLIANT
- 3 YEARS WARRANTY



OUTPUT SPECIFICATIONS

Voltage Set-point Accuracy	+/-2% max
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) ¹	100mVp-p max
Line Regulation ²	+/-1.2% max
Load Regulation ³ (other Vout)	+/-8% max
Load Regulation ⁴ (3.3V Vout)	+/-12% max
Minimum Load	20% of Full Load
Short Circuit Protection	Momentary

INPUT SPECIFICATIONS

Input Voltage Range	+/-10% max
Input Filter	Capacitor Type
Protection	Fuse Recommended

GENERAL SPECIFICATIONS

Efficiency	70%-82%
Isolation Voltage ⁵	1500 VDC min
Isolation Resistance	10 ⁹ ohms min
Isolation Capacitance	80pF max
Switching Frequency	100KHz min
MTBF ⁶	>2,900,000 Hours
Weight	1.7g Typ
Case Material	Non-Conductive Plastic
Case Size A	12.75mm*10.10mm*7.10mm
Case Size B	12.70mm*10.10mm*7.67mm
Conducted Emissions	EN55022 Class A
Radiated Emissions	EN55022 Class A

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25 °C to +71 °C
Storage Temperature	-55 °C to +125 °C
Humidity	95% max
Cooling	Free-Air Convection

ALL SPECIFICATIONS TYPICAL AT NOMINAL LINE, FULL LOAD AND 25 °C UNLESS OTHERWISE NOTED.

¹ Measured with 1uF ceramic capacitor connect to the output pins.

² Line Regulation is for a 1.0% change in input Voltage.

³ Load Regulation is for output load current change from 20% to 100%.

⁴ Load Regulation is for output load current change from 20% to 100% when input voltage is 3.3V.

⁵ 1500VDC for 10 seconds.

⁶ MIL-HDBK-217F @25 °C , Ground Benign.

DANUBE

<http://www.danube.com.tw>

5-1

2010/04/12

● **SELECTION GUIDE**
1W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ¹ CURRENT(mA)		EFF (%) ²	ISOLATION (VDC)	PACKAGE
				FULL LOAD	NO LOAD			
MAUS-0305	3	5	200	475	60	70	1500	A
MAUS-03.305	3.3	5	200	428	60	71	1500	A
MAUS-0505	5	5	200	260	29	77	1500	A
MAUS-0509	5	9	110	260	29	77	1500	A
MAUS-0512	5	12	84	253	29	79	1500	A
MAUS-0515	5	15	67	253	29	79	1500	A
MAUS-1205	12	5	200	109	20	76	1500	A
MAUS-1209	12	9	110	105	20	79	1500	A
MAUS-1212	12	12	84	102	20	82	1500	A
MAUS-1215	12	15	67	102	20	82	1500	A
MAUS-2405	24	5	200	54	9	77	1500	B
MAUS-2409	24	9	110	54	9	77	1500	B
MAUS-2412	24	12	84	54	10	77	1500	B
MAUS-2415	24	15	67	52	9	80	1500	B
MAUS-4805	48	5	200	29	6	72	1500	B
MAUS-4809	48	9	110	27	6	77	1500	B
MAUS-4812	48	12	84	27	6	77	1500	B
MAUS-4815	48	15	67	26	6	79	1500	B

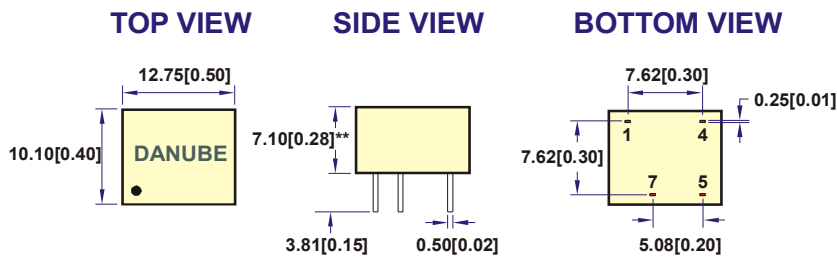
Note: Other input to output voltages may be available. Please contact factory.

¹ NOMINAL INPUT VOLTAGE.

² NOMINAL INPUT VOLTAGE, FULL LOAD.

MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

PACKAGE "A"

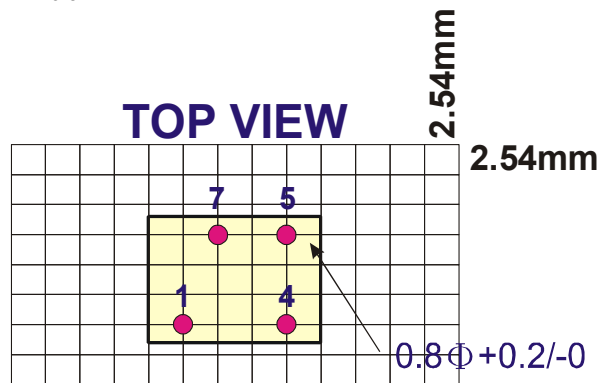


PIN	SINGLE
1	-Vin
4	+Vin
5	+Vout
7	-Vout

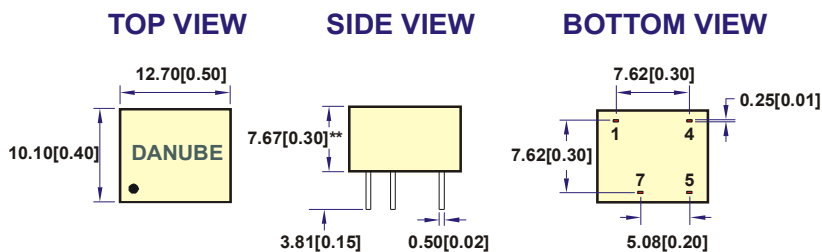
All dimensions are in mm[inches]

NOTE : All Dimensions In mm(Inches)

1. Pin Size is 0.50x0.30mm[0.02x0.01"]
2. Pin is Tolerance .XX= ±0.05mm
3. Tolerance .X or .XX= ±0.5mm



PACKAGE "B"



PIN	SINGLE
1	-Vin
4	+Vin
5	+Vout
7	-Vout

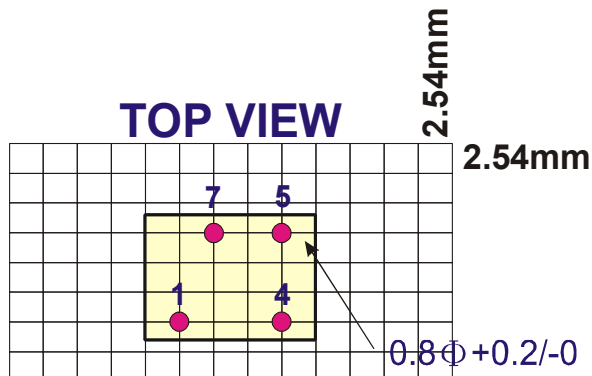
All dimensions are in mm[inches]

NOTE:

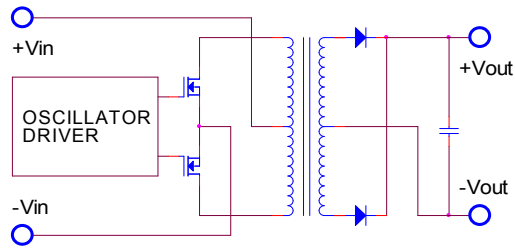
Pin Size is Tolerance 0.50Φ ±0.05mm

All Dimensions In mm(Inches)

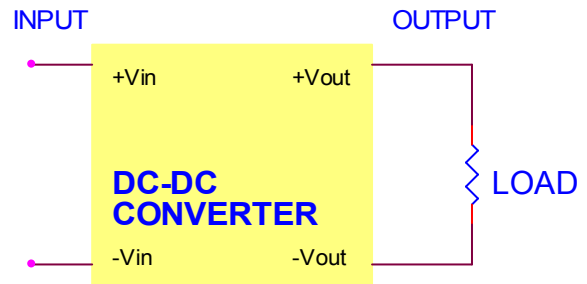
Tolerance .X or .XX= ±0.5mm



● SIMPLIFIED SCHEMATIC



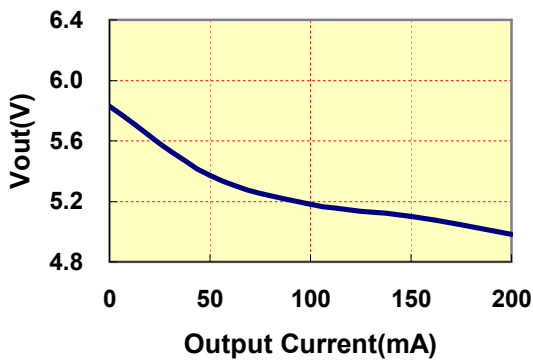
● TYPICAL APPLICATIONS



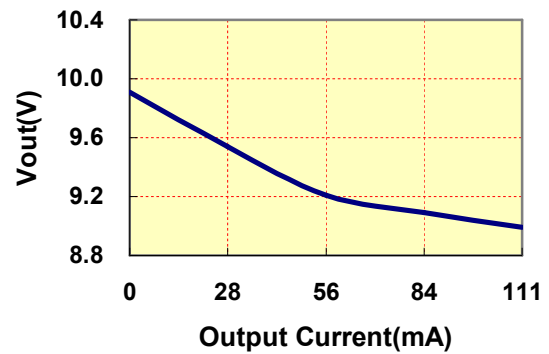
● TYPICAL PERFORMANCE CURVES

Specifications typical at $t_a=25^{\circ}\text{C}$, nominal input voltage, rated output current unless otherwise specified.

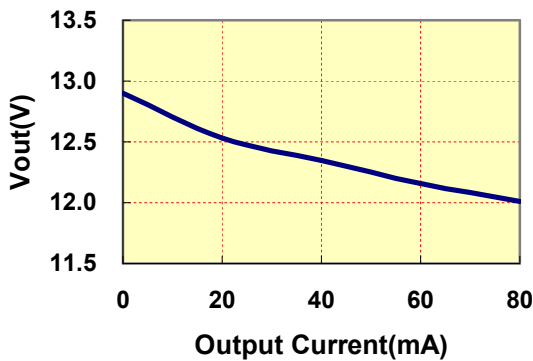
VOU_T VS LOAD(5V_{out} Models)



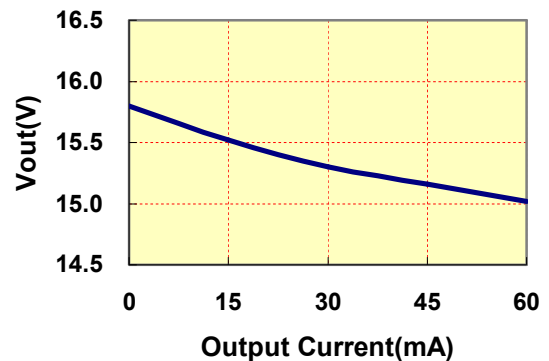
VOU_T VS LOAD(9V_{out} Models)



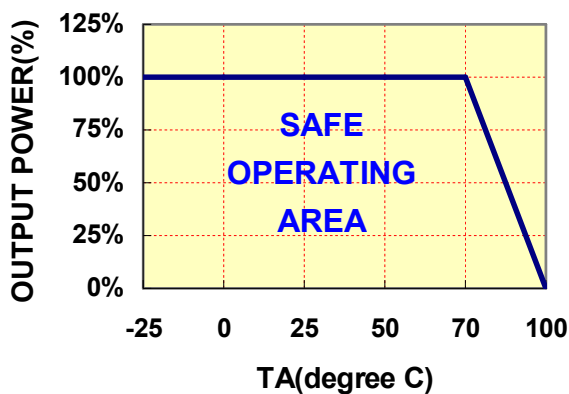
VOU_T VS LOAD(12V_{out} Models)



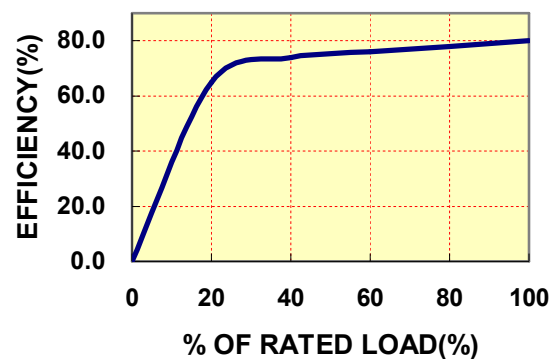
VOU_T VS LOAD(15V_{out} Models)



DERATING CURVE



EFFICIENCY VS LOAD



● INPUT FUSE SELECTION GUIDE

3.0-3.6V	4.5-5.5V	10.8-13.2V	21.6-26.4V	43.2-52.8V
INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)
1500mA Slow-Blow Type	800mA Slow-Blow Type	300mA Slow-Blow Type	150mA Slow-Blow Type	100mA Slow-Blow Type

Note: Certain applications may require the installation of external fuse in front of the input.

MAU SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

Output filtering is required for operation. A minimum of 10uF is needed. Output capacitance may be increased for additional filtering, not to exceed 220uF.

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 250KHz is required.

We Can Offer EMC-Filter According To EN55011/22 Class B.

Negative Outputs:

A negative output voltage may be obtained by connecting the +OUT to circuit ground and connecting -OUT as the negative output.

FOR MORE INFORMATION CALL:

Danube Enterprise Co., Ltd.

Tel: 886-7-3755165

Fax: 886-7-3755330

E-mail: danube@ms10.hinet.net

Home Page

<http://www.danube.com.tw>
